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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,646	11/24/2004	Yasuyuki Imaizumi	121381	3935
25944 7590 12/10/2009 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
YAGER, JAMES C				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
12/10/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/510,646

Applicant(s)

IMAZUMI, YASUYUKI

Examiner

JAMES YAGER

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 19 November 2009 has been entered.

Response to Amendment

2. The amendment filed 19 November 2009 has been entered. Claims 1-15, 17 and 18 are currently pending in the application. The rejections of record from the office action dated 22 July 2009 not repeated herein have been withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-15, 17 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support to recite that the projecting portion extends radially beyond the outermost radial dimension of the outermost surface of the outer layer.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-7, 9-14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatayama (JP 61-8544) in view of Kincaid (US 4,196,825).

Regarding claims 1, 2, 9 and 10, Hatayama discloses a laminated tube having a substrate layer (Fig. 2, 11a) that makes up the main body of said tube, a linear projecting portion or portions extending straight along an entire axial length of the tube in an axial direction (Translation pg 3, para 4, Fig 1 and Fig. 2, 22b). The projections of Hatayama clearly extend radially beyond the outermost radial dimension of the outermost surface of the substrate layer (Fig 1 and Fig. 2). It is clear that a portion of the laminated tube is not covered by the projecting portion that extends straight along the entire axial length of the tube in an axial direction (Fig. 2, 22a).

The American Heritage Dictionary of the English Language: Fourth Edition defines laminate as "to make by uniting several layers". Because Hatayama discloses layers that are united (Fig. 2, 11a and 11b), the examiner's position is that Hatayama discloses a laminated tube.

Given that the projections follow along the axial length of the tube (i.e. do not deviate from the straight axial length)), it is clear that the projections meet the limitation of "extending straight along an entire axial length of the tube in an axial direction".

Hatayama does not disclose an outer layer or wherein the substrate layer is made of an aluminum-laminated material.

Kincaid discloses laminated tube having a substrate layer that makes up the body of said tube wherein the substrate layer is made of an aluminum-laminated material (C1/L60-65). It is the examiners position that the aluminum layer is the outer layer because it is outside of the substrate layer.

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the aluminum-laminated material substrate of Kincaid into the laminated tube of Hatayama with a reasonable expectation of success because the laminate disclosed by Kincaid was successfully used in an analogous invention. Doing so would amount to nothing more than a use of a known material for its intended use in a known environment to accomplish an entirely expected result.

Given that the outer layer of modified Hatayama is made of aluminum and the substrate layer is made of polyolefin resin, it is clear that the substrate layer is more flexible than the laminated outer layer, which is harder than the substrate layer and the colors of the substrate layer and the outer layer differ (i.e. wherein said main body of said tube and said outer layer have different colors).

Regarding claim 3, Hatayama further discloses a laminated tube wherein the projecting portion is linear (Fig. 1, 22). Regarding claim 4, Hatayama further discloses wherein a multiple number of projecting portions are disposed (Fig. 1, 22). Regarding claim 5, Hatayama further discloses wherein a pair of projecting portions is disposed axissymmetrically in the cross-sectional view (Fig. 5 and Fig. 6, The stamping rollers (18) form the projecting portions axissymmetrically in the cross-sectional view).

Regarding claim 11, Hatayama further discloses wherein said projecting portion or portions are spirally disposed (Fig. 2, 22). Regarding claim 12, Hatayama further discloses wherein said projecting portions have a wave form (Fig. 2, (C)).

Regarding claim 14, Hatayama discloses all of the claim limitations as set forth above. Hatayama further discloses a molded tube product (translation pg 2, para 2,

hot-press molded) wherein said tube is cut to a given length , flattened and sealed at one end, and is provided with a head portion of a shoulder and a neck at the other end (Fig. 1).

Regarding claim 17, Hatayama discloses all of the claim limitations as set forth above. Given that the projecting portion is in the same position and the article of Hatayama is stably maintained in the form of a tube, it is clear that the projecting portion must be acting as a backbone.

Regarding claims 6 and 7, Hatayama discloses all of the claims limitations as set forth above, but the reference does not explicitly disclose the projecting portions having different widths nor an even number of projecting portions is disposed at equal intervals. Since the instant specification is silent to unexpected results, the widths of the projecting portions and the precise number and interval of disposition of the projecting portions are not considered to confer patentability to the claims. As the ornamentation of the tube is a variable that can be modified, among others, by adjusting said width of the projecting portions or by adjusting said number and disposition of the projecting portions, varying the widths or the number and disposition of the projecting portions would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed variation of widths or number and disposition of the projecting portions or cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the widths or number and disposition of the projecting portions in Hatayama to obtain the

desired ornamentation (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

Regarding claim 13, Hatayama discloses all of the claims limitations as set forth above, but the reference does not explicitly disclose wherein each projecting portion has a different color. Hatayama does disclose that the substrate layer and the outer layer are different colors (translation, pg 3, para 5). It is noted that, at the time of the invention, it was known that by using different colors, a desired aesthetic result is achieved. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a tube wherein each projecting portion has a different color because there was a reasonable expectation that doing so would achieve the desired aesthetic value of the tube.

8. Claims 1-7, 9-14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatayama (JP 61-8544) in view of Redding (US 4,943,780).

Regarding claims 1, 2, 9 and 10, Hatayama discloses a laminated tube having a substrate layer (Fig. 2, 11a) that makes up the main body of said tube, a linear projecting portion or portions extending straight along an entire axial length of the tube in an axial direction (Translation pg 3, para 4, Fig 1 and Fig. 2, 22b). The projections of Hatayama clearly extend radially beyond the outermost radial dimension of the outermost surface of the substrate layer (Fig 1 and Fig. 2). It is clear that a portion of

the laminated tube is not covered by the projecting portion that extends straight along the entire axial length of the tube in an axial direction (2, 22a).

The American Heritage Dictionary of the English Language: Fourth Edition defines laminate as "to make by uniting several layers". Because Hatayama discloses layers that are united (Fig. 2, 11a and 11b), the examiner's position is that Hatayama discloses a laminated tube.

Given that the projections follow along the axial length of the tube (i.e. do not deviate from the straight axial length)), it is clear that the projections meet the limitation of "extending straight along an entire axial length of the tube in an axial direction".

Hatayama does not disclose an outer layer or wherein the substrate layer is made of an aluminum-laminated material.

Redding discloses a multilayer sheet structure (C1/L13-22) for making toothpaste tubes (C7/L55-57) comprising a substrate comprising aluminum foil and ldpe (i.e. an outer layer laminated on a substrate layer made of an aluminum laminated material) (C4/L7-18). Redding further discloses that a thin layer of aluminum foil provides a high quality barrier layer.

Hatayama and Redding are analogous art because they both teach about toothpaste tubes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the aluminum layer of Redding into the laminated tube of Hatayama to provide a tube with good barrier properties.

Given that the outer layer of modified Hatayama is made of aluminum and the substrate layer is made of polyolefin resin, it is clear that the substrate layer is more

flexible than the laminated outer layer, which is harder than the substrate layer and the colors of the substrate layer and the outer layer differ (i.e. wherein said main body of said tube and said outer layer have different colors).

Regarding claim 3, Hatayama further discloses a laminated tube wherein the projecting portion is linear (Fig. 1, 22). Regarding claim 4, Hatayama further discloses wherein a multiple number of projecting portions are disposed (Fig. 1, 22). Regarding claim 5, Hatayama further discloses wherein a pair of projecting portions is disposed axissymmetrically in the cross-sectional view (Fig. 5 and Fig. 6, The stamping rollers (18) form the projecting portions axissymmetrically in the cross-sectional view).

Regarding claim 11, Hatayama further discloses wherein said projecting portion or portions are spirally disposed (Fig. 2, 22). Regarding claim 12, Hatayama further discloses wherein said projecting portions have a wave form (Fig. 2, (C)).

Regarding claim 14, Hatayama discloses all of the claim limitations as set forth above. Hatayama further discloses a molded tube product (translation pg 2, para 2, hot-press molded) wherein said tube is cut to a given length, flattened and sealed at one end, and is provided with a head portion of a shoulder and a neck at the other end (Fig. 1).

Regarding claim 17, Hatayama discloses all of the claim limitations as set forth above. Given that the projecting portion is in the same position and the article of Hatayama is stably maintained in the form of a tube, it is clear that the projecting portion must be acting as a backbone.

Regarding claims 6 and 7, Hatayama discloses all of the claims limitations as set forth above, but the reference does not explicitly disclose the projecting portions having different widths nor an even number of projecting portions is disposed at equal intervals. Since the instant specification is silent to unexpected results, the widths of the projecting portions and the precise number and interval of disposition of the projecting portions are not considered to confer patentability to the claims. As the ornamentation of the tube is a variable that can be modified, among others, by adjusting said width of the projecting portions or by adjusting said number and disposition of the projecting portions, varying the widths or the number and disposition of the projecting portions would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed variation of widths or number and disposition of the projecting portions or cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the widths or number and disposition of the projecting portions in Hatayama to obtain the desired ornamentation (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

Regarding claim 13, Hatayama discloses all of the claims limitations as set forth above, but the reference does not explicitly disclose wherein each projecting portion has a different color. Hatayama does disclose that the substrate layer and the outer layer

are different colors (translation, pg 3, para 5). It is noted that, at the time of the invention, it was known that by using different colors, a desired aesthetic result is achieved. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a tube wherein each projecting portion has a different color because there was a reasonable expectation that doing so would achieve the desired aesthetic value of the tube.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatayama (JP 61-8544) in view of Kincaid (US 4,196,825) or Redding (US 4,943,780), as applied to claim 1 above, in view of Redmond (2001/0030192).

Regarding claim 15, modified Hatayama discloses all of the claim limitations as set forth above. Modified Hatayama does not disclose that the tube is cut to a given length, flattened and sealed at both ends.

Redmond discloses a molded tube product ([0021], formed by injection molding) comprising a laminated tube ([0003], [0009], dispenser package made of laminated plastics and foils) wherein said tube is cut to a given length, flattened and sealed at both ends (Fig. 1A). Redmond discloses that the tube product is for dispensing toothpaste and is capable of economical, high-speed production ([0009]).

Modified Hatayama and Redmond are analogous art because they both teach about tube products for dispensing toothpaste. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the sealed at both ends design of Redmond to make the tube of modified Hatayama to make a tube with the advantage of economical, high-speed production.

Response to Arguments

10. Applicant's arguments with respect to claims 1-15, 17 and 18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES YAGER whose telephone number is (571)270-3880. The examiner can normally be reached on Mon - Fri, 7:30am-5pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY 12/1/09

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1794